

Protective patch linked to erectile function recovery

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Taipei, Taiwan—The application of dehydrated human amniotic membrane (dHAM) as a therapeutic patch covering the neurovascular bundle may have profound effects on the early recovery of erectile function in men undergoing nerve-sparing, robot-assisted laparoscopic radical prostatectomy, a retrospective study suggests.

The study examined 60 patients who underwent surgery for low-volume prostate cancer. Of 22 men receiving an AmnioFix (MiMedx, Marietta, GA) dHAM during a bilateral nerve-sparing procedure, 20 (90.9%) demonstrated a return of erectile function at 3 months, and 21 men (95.5%) recovered function at 6 months. In 38 men undergoing the same procedure but without the dHAM, 16 (42.1%) recovered erectile function at 3 months and 20 (52.6%) at 6 months ($p=.0005$ at 3 months and $\leq .0002$ at 6 months for the cohort comparisons).

The patch appears to assert its influence early. Only two of the men (5.26%) without the patch had erectile function at first follow-up compared to nine of men (40.9%) receiving the patch ($p=.0006$).

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"I think we now have a means of circumventing some of the surgical trauma (associated with nerve-sparing prostatectomy). No matter how good we are, we inflict some trauma on these fine, delicate nerves," Sanjay Razdan, MD, MCh, director of the International Robotic Prostatectomy Institute and associate professor of urology at the Herbert Wertheim College of Medicine, Florida International University, Miami, told *Urology Times*.

Dr. Razdan, the study's lead author and sole surgeon, said the insults to the neurovascular bundle included thermal injury, inflammation, traction injury, and scar tissue formation.

"I think that adding this layer of protection with a dehydrated amniotic membrane is going to go a long way in bringing a rapid return of erectile function," he said.

Dr. Razdan explained that the dHAM derived its effects from a rich trove of growth factors such as TGF-a and TGF-b, which encourage wound healing; bFGF, which promotes cell growth and tissue repair; and factors such as EGF, PDGF, and VEGF, all of which mediate the proliferation and differentiation of cells. These factors have anti-inflammatory properties as well as anti-scarring effects.

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